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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/483,385	01/13/2000	Li-Wen Chen	19608-000210US	8308

30256 7590 09/12/2003

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EXAMINER
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COLBERT, ELLA

ART UNIT	PAPER NUMBER
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3624

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/483,385

Applicant(s)

CHEN, LI-WEN

Examiner

Ella Colbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6, 11-15, 20-22, 24, 29-31, 33 and 38-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11-15, 20-22, 24, 28-31, 33, 40 and 41 is/are rejected.
- 7) ☒ Claim(s) 29, 38 and 39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

1. Claims 1-6, 11-15, 20-22, 24, and 29-31 are pending. Claims 7-10, 16-19, 25-28, 34-37 have been cancelled and claims 38-41 have been added in this communication filed 06/12/03 entered as Amendment A, paper no. 10.
2. The Claim Objections to claims 4 and 14 has been overcome by Applicant's amendment to claims 4 and 14 and is hereby withdrawn.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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4. Claims 1-6, 11-15, 20-22, 24, 29-31,33, and 38-41 are provisionally rejected under the judicially created doctrine of double patenting over claims 1-6, 11-15, 20-22, 29-31, 33, and 38-42 of copending Application No. 09/483,386 and claims 1-6, 11-15, 20-22, 24, 29- 31, 33, and 38-41 of copending Application No. 09/483,182. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

5. The subject matter claimed in the instant application is fully disclosed in the referenced copending application 09/483,386 and copending application 09/483,182 and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: creating a multi dimensional report from information in a database, receiving a definition of a customer profile, receiving from a user input indicating a report configuration selection, creating a first dimension table, and creating a fact table.

This is a provisional obviousness-type double patenting rejection.

The co-pending Application '386 claims 1-6, 11-15, 20-22, 29-31, 33, and 38-41 claim a computer program product for performing the steps of analyzing information in at least one source database and the co-pending Application '182 claims 1-6, 11-15, 20-22, 24, 29-31, 33, and 38-41 claim an apparatus for performing the steps of creating a multi dimensional report from information in a database. The claim limitations in the '386 and '182 co-pending applications are substantially the same as the instant application.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 11-14, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,799,286) Morgan et al, hereafter Morgan in view of (US 6,377,993) Brandt et al, hereafter Brandt and further in view of (US 6,212,524) Weissman et al, hereafter Weissman.

With respect to claims 1 and 11, Morgan teaches, receiving input indicating at least one quantity of interest in the information (col. 8, lines 32-66 and col. 9, lines 1-25).

Morgan did not teach, receiving a definition for a data model; and dynamically creating at least one generated database based upon the data model and configured to the quantity of interest further comprising: creating at least one first dimension table based upon the data schema and the quantity of interest; and creating at least one fact table based upon the data schema and the quantity of interest and the information.

Brandt discloses, receiving a definition for a data model (col. 19, lines 52-67 and col. 20, lines 1-18); and dynamically creating at least one generated database based upon the data model and configured to the quantity of interest further comprising: creating at least one first dimension table based upon the data schema and the quantity of interest; and creating at least one fact table based upon the data schema and the quantity of interest and the information (col. 3, lines 48-61, col. 20, lines 19-67, and col.

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21, lines 1-17). It would have been obvious to one having ordinary skill in the art at the time the invention was made to receive a definition for a data model; and dynamically create at least one generated database based upon the data model and configured to the quantity of interest further comprising: creating at least one first dimension table based upon the data schema and the quantity of interest; and creating at least one fact table based upon the data schema and the quantity of interest and the information and to modify in Morgan because such a modification would allow Morgan to have a Datamart that supports customized data access.

Morgan and Brandt did not teach, displaying at least a portion of the dynamically generated database.

Weissman discloses, displaying at least a portion of the dynamically generated database (col. 15, lines 8-14, col. 26, lines 25-42 and col. 37, lines 11-16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have display at least a portion of the dynamically generated database and to modify in Morgan and Brandt because such a modification would allow Morgan and Brandt to have a datamart that is in a star schema associated with a dimension table stored in a database that can be displayed to a user.

With respect to claims 2 and 12, Morgan teaches, generating a customer profile report and wherein the information comprises business performance measures (col. 7, lines 40-56, col. 9, lines 1-22, fig. 8 & fig. 18B), and wherein: creating at least one first dimension table further comprises: creating a customer profile hierarchy; and creating at

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least one fact table further comprises: aggregating said business performance measures according to said customer profile hierarchy (col. 5, lines 36-63).

With respect to claims 3 and 13, Morgan teaches, generating an operation report (col. 7, lines 40-56, col. 9, lines 1-22, and fig. 8 & fig. 18B).

Morgan and Brandt did not teach, creating at least one fact table comprises: aggregating said business performance measures according to said customer profile hierarchy.

Weissman discloses, creating at least one fact table further comprises: aggregating said business performance measures according to said customer profile hierarchy (col. 15, lines 8-14 and lines 34-65 and col. 26, lines 25-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have create at least one fact table further comprising: aggregating said business performance measures according to said customer profile hierarchy and to modify in Morgan and Brandt because such a modification would allow Morgan and Brandt to have the fact table key point to the fact table and the aggregate group to define a set of aggregates to be built for a constellation.

With respect to claims 4 and 14, Morgan and Brandt did not teach, creating at least one first dimension table further comprises: creating at least one of a plurality of customer profiling dimensions based upon the at least one of a plurality of customer profile groups; and creating at least one fact table further comprises: aggregating customer records based on at least one of a plurality of customer profiling dimensions.

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Weissman discloses, creating at least one first dimension table (col. 14, lines 9-67, col. 15, lines 8-14 and col. 26, lines 25-42) further comprises: creating at least one of a plurality of customer profiling dimensions based upon the at least one of a plurality of customer profile groups and creating at least one fact table further comprises: aggregating customer records based on at least one of a plurality of customer profiling dimensions (col. 7, lines 64-67, col. 8, lines 1-25, and col. 10, lines 24-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to creating at least one first dimension table further comprises: create at least one of a plurality of customer profiling dimensions based upon the at least one of a plurality of customer profile groups; and create at least one fact table further comprises: aggregating customer records based on at least one of a plurality of customer profiling dimensions and to modify in Morgan and Brandt because such a modification would allow Morgan and Brandt to have special dimensions to indicate whether or not the dimension columns can be created and to have a map key that indicates the mapping group to use.

8. Claims 5, 6, 15, 24, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan, Brandt, and Weissman in view of (US 5,615,109) Eder.

With respect to claims 5, 15, 24, and 33, Morgan and Brandt did not teach, creating a list of customers for each one of the plurality of customer profile groups; creating at least one intermediary data structure to manage the list of customers; and creating customer classification components in a meta model for each customer profile group.



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Weissman discloses, creating a list of customers for each one of the plurality of customer profile groups (col. 12, lines 63-67, col.13, lines 1-11, col. 35, lines 5-12 and col. 35, lines 30-54, and figs. 8-10) and creating at least one intermediary data structure to manage the list of customers (col. 34, lines 33-63).

Morgan, Brandt, and Weissman did not teach, creating customer classification components in a meta model for each customer profile group.

Eder discloses, creating customer classification components in a meta model for each customer profile group (col. 13, lines 1-20- shows a meta model for each profile group). It would have been obvious to one having ordinary skill in the art at the time the invention was made to create customer classification components in a meta model for each customer profile group and to modify in Morgan, Brandt, and Weissman because such a modification would allow Morgan, Brandt, and Weissman to show a measure for the firm's financial performance during prior periods when data input has been completed.

With respect to claim 6, Morgan, Weissman, and Eder did not teach, wherein said information comprises at least one of telecommunications information, financial information, retail marketing information, insurance information, and healthcare information.

Brandt discloses, wherein said information comprises at least one of telecommunications information, financial information, retail marketing information, insurance information, and healthcare information (col. 5, lines 56-61, col. 18, lines 6-35, and col. 6, lines 7-9). It would have been obvious to one having ordinary skill in the

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art at the time the invention was made to have information comprise at least one of telecommunications information, financial information, retail marketing information, insurance information, and healthcare information and to modify in Morgan, Weissman, and Eder because such a modification would allow Morgan, Weissman, and Eder to have a network with telecommunications information defining the physical network to satisfy the data volume requirements and to have metadata in a datamart that includes financial information, retail marketing information, insurance information, and healthcare information for a business organization.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 20-23, 31, 32, 38, 41, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 6,212,524) Weissman et al, hereafter Weissman in view of (US 5,799,286) Morgan et al, hereafter Morgan.

With respect to claim 20, Weissman teaches, defining a virtual data model definition (col. 7, lines 34-63); determining from the virtual data model a second data schema, receiving as input a third data model definition (col. 10, lines 24-42); and creating a third database having a third data schema from the third data model (col. 10, lines 63-67).

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Weissman did not teach, creating a first mapping, that provides for a translation for data from said first data schema to said second data schema; creating a second mapping, that provides a translation for data from the second data schema to the third data schema; and selectively migrating information from at least one of the first database to the second database according to the first mapping and the second database to the third database according to the second mapping.

Morgan discloses, creating a first mapping, that provides for a translation for data from said first data schema to said second data schema; creating a mapping, that provides a translation for data from the second data schema to the third data schema (col. 5, lines 64-67 and col. 6, lines 1-13); and code for selectively migrating information from at least one of the first database to the second database according to the first mapping (col. 6, lines 37-63). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have creating a first mapping, that provides for a translation for data from said first data schema to said second data schema; creating a mapping, that provides a translation for data from the second data schema to the third data schema; and selectively migrating information from at least one of the first database to the second database according to the first mapping and to modify in Weissman because such a modification would allow Weissman to have mapped data that basically identifies the management organizations at a site in the second data schema and the first data schema to contain personnel information or people mapping and the third data schema to contain cost.

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With respect to claim 21, Weissman teaches, the first data schema comprises a star schema (col. 7, lines 35-42 and col. 10, lines 29-35).

With respect to claims 22 and 31, Weissman teaches, the virtual data model comprises an identity centric data organization (col. 2, lines 26).

With respect to claims 23 and 32, Weissman teaches, the identity is a customer identity. (col. 26, lines 5-42).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over (US 6,212,524) Weissman et al, hereafter Weissman in view of (US 6,377,993) Brandt et al, Brandt.

With respect to claim 30, Weissman teaches, defining based upon a virtual data model a data warehouse (col. 1, lines 61-67, col. 6, lines 50-60, and fig. 1 (150)); receiving as input a definition of a second data model (col. 2, lines 27-39); creating a first mapping from said first data model to said data warehouse (col. 5, lines 14-25); creating a second mapping from said data warehouse to said second data model (col. 10, lines 24-42 and col. 18, lines 32-35).

Weissman did not teach, analyzing information based upon said second data model, using the first mapping and the second mapping.

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Brandt discloses, analyzing information based upon said second data model, using the first mapping and the second mapping (col. 23, lines 17-33). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have analyze the information based upon said second data model, using the first mapping and the second mapping and to modify in Weissman because such a modification would allow Weissman to have a request that has been mapped (first mapping) sent from the database to the mapping table (second mapping).

13. Claims 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US 5,799,286) Morgan et al, hereafter Morgan in view of (US 6,377,993) Brandt et al, Brandt and further in view of (US 6,212,524) Weissman et al, hereafter Weissman

With respect to claim 40, Morgan teaches, receiving a selection of targeted customer segment of interest as the quantity of interest (col. 8, lines 32-66 and col. 9, lines 1-25).

Morgan did not teach, generating at least one of a plurality of target customer segment tables based upon the dynamically generated database.

Brandt discloses, generating at least one of a plurality of target customer segment tables based upon the dynamically generated database (col. 3, lines 48-61, col. 20, lines 19-67, col. 21, lines 1-17).

Morgan and Brandt did not teach, providing the targeted customer segment tables to external applications.

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Wiessman teaches, providing the targeted customer segment tables to external applications (col. 14, lines 9-67, col. 15, lines 1-14, and col. 26, lines 5-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to generate at least one of a plurality of target customer segment tables based upon the dynamically generated database and to modify in Morgan because such a modification would allow Morgan to have people module computations in a table for configuration planning.

Weissman and Morgan did not teach, generating at least one of a plurality of target customer segment tables based upon the dynamically generated database. It would have been obvious to one having ordinary skill in the art at the time the invention was made to generate at least one of a plurality of target customer segment tables based upon the dynamically generated database have a state schema model including a fact table joined by a number of attendant tables known as dimensions.

With respect to claim 41, Weissman teaches, receiving an input from an on-line application processor (OLAP) (col. 9, lines 48-60); transforming the input into a database query based upon the data model; and providing information in response to the database query (col. 10, lines 5-13).

***Allowable Subject Matter***

14. Claims 29, 38, and 40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter: claims 29 reciting "virtual data model comprises a reverse star schema", claim 39 reciting "generating a data warehouse populated with the information from the source database and in accordance with the reverse star schema meta-model", and claim 39 reciting "the meta-model schema is a reverse star schema" was not shown or suggested by the prior art of record.

### ***Response to Arguments***

15. Applicant's arguments with respect to claims 1-6, 11-15, 20-24, 29-33, and 38 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Roccaforte (US 6,484,179) disclosed multidimensional data in a relational database management system, a fact table, a mapping function and a multidimensional cube.

Castelli et al (US 5,978,788) disclosed an online analytical processing engine, mapping, a dimension table, a fact table, and data warehouse.

Colby et al (US 6,594,653) disclosed fact tables, aggregate views and tables, hierarchies, and dimension tables.


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### Inquiries

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 703-308-7064. The examiner can normally be reached on Monday-Thursday from 6:30 am -5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 703-308-1038. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687 (Official Fax) and (703) 746-5622 (Unofficial Fax).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

  
E. Colbert  
September 8, 2003